

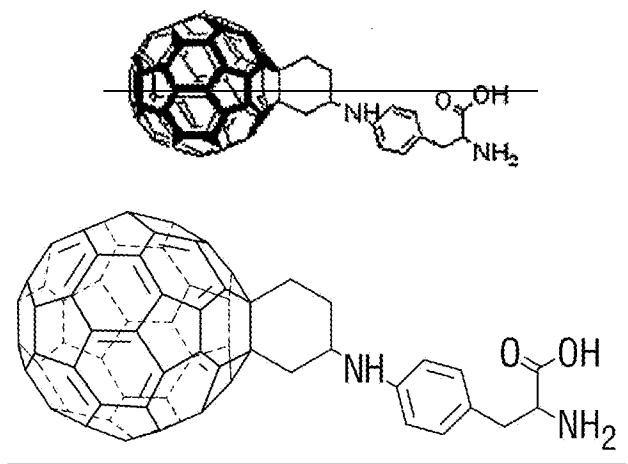
### AMENDMENTS TO THE CLAIMS

Current additions to the claims are noted with underlined text. Current deletions from the claims are indicated by ~~striketrough~~ or [[bracketed]] text.

1 (Currently Amended). An amino acid composition having a general formula of ~~at least one of~~  $\text{H}_2\text{N}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{OH}$  ,  $-\text{HN}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{OH}$ ,  $\text{H}_2\text{N}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{O}-$ , or and  $-\text{HN}-\text{CH}(\text{R})-\text{C}(\text{O})\text{O}-$ , wherein the R functionality comprises a fullerene species derived from a buckyketone.

2 (Cancelled).

3 (Currently Amended). The amino acid composition of claim 1, wherein said amino acid composition comprises the following compound:



4 (Cancelled).

5 (Currently Amended). The amino acid composition of claim 1, wherein both the amine functionality and the carboxylic acid functionality on the amino acid composition are protected, and wherein the amino acid has a general formula of  $-\text{HN}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{O}-$ .

6 (Currently Amended). The amino acid composition of claim 1, wherein one of either the amine functionality or the carboxylic acid functionality on the amino acid composition is protected, and wherein the amino acid composition has a general formula of ~~at least one of~~ -HN-CH(R)-C(O)-OH[[-]] or ~~and~~ H<sub>2</sub>N-CH(R)-C(O)-O-.

7 (Original). The amino acid composition of claim 6, wherein the amine functionality is protected with a protecting group selected from the group consisting of Boc, Fmoc, and combinations thereof.

8 (Cancelled).

9 (Previously Presented). The amino acid composition of claim 1, wherein the fullerene species is endohedrally-doped with a species selected from the group consisting of radioactive species, non-radioactive species, metals, gases, spin 1/2 nuclei, and combinations thereof.

10 (Currently Amended). A synthetic polymer comprising an amino acid composition, wherein the amino acid composition has a general formula of ~~at least one of~~ H<sub>2</sub>N-CH(R)-C(O)-NH- or ~~and~~ -HN-CH(R)-C(O)-NH-, and wherein the R functionality comprises a fullerene species derived from a buckyketone.

11 (Previously Presented). The synthetic polymer of claim 10, further comprising at least one naturally occurring amino acid.

12 (Currently Amended). The synthetic polymer of claim 10, wherein the synthetic polymer is selected from the group consisting of peptide chains, polypeptides, and proteins, ~~and combinations thereof.~~

13 (Previously Presented). The synthetic polymer of claim 10, wherein the synthetic polymer is

a protein exhibiting a biological function selected from the group consisting of enzymatic functions, antibody functions, oxygen transport, ion transport, and combinations thereof.

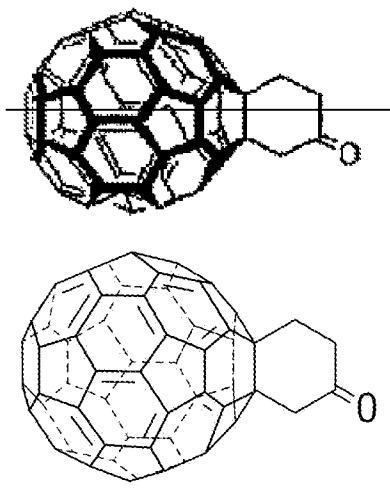
14 (Cancelled).

15 (Currently Amended). The synthetic polymer of claim 10 44, wherein the fullerene species provides for reaction "pockets" within said polymer.

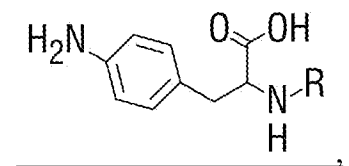
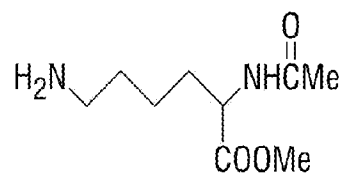
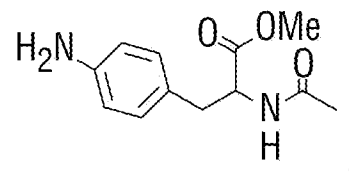
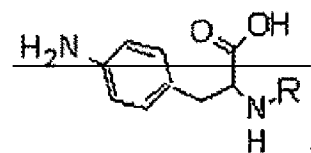
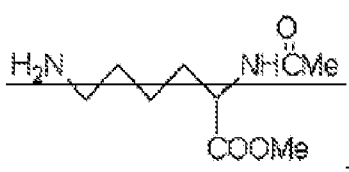
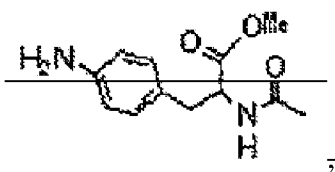
16 (Currently Amended). The synthetic polymer of claim 10 44, wherein the fullerene species serves as a link between at least two amino acids.

17 (Currently Amended). A method comprising the steps of:

a) reacting the following compound



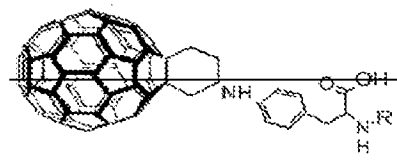
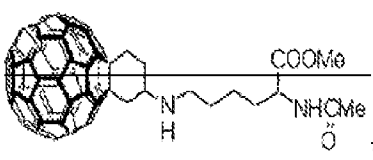
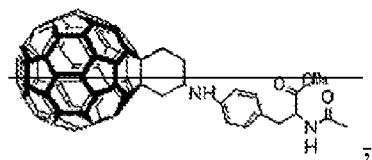
with a compound selected from the group consisting of:

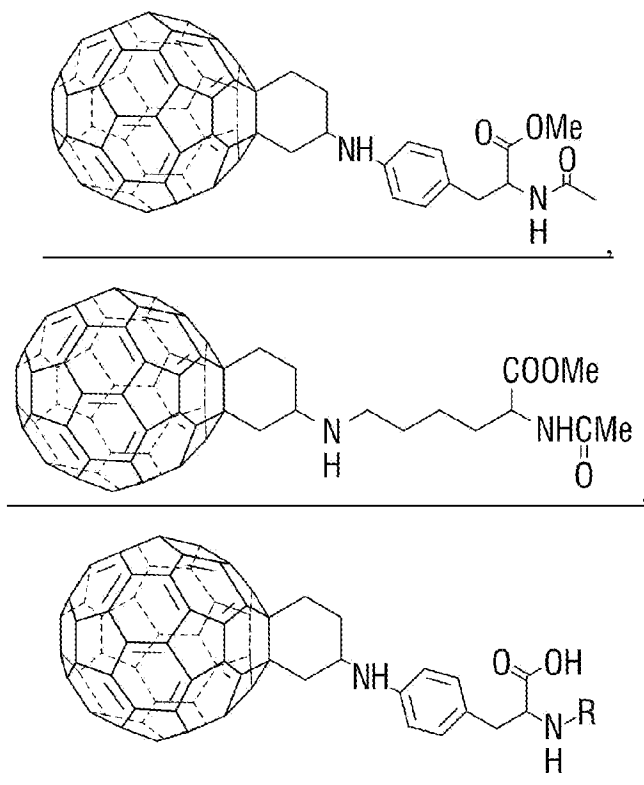


wherein R is a protecting group.

and combinations thereof to yield an imine intermediate; and

b) hydrogenating the imine intermediate with  $\text{BH}_3\text{-THF}$  to yield at least one product selected from the group consisting of





,wherein R is a protecting group.

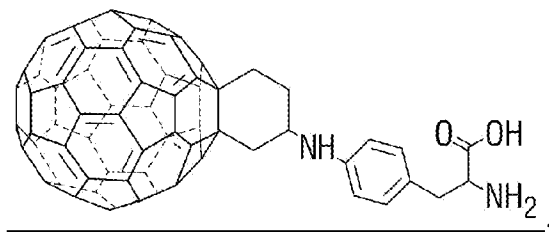
and combinations thereof.

18 (Previously Presented). The method of claim 17, further comprising a deprotection step.

19 (Cancelled).

20 (Currently Amended). The method of claim 18, wherein the method yields the following compound:

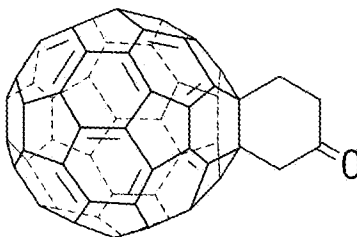




21-25 (Cancelled).

26 (New). The method of claim 17, wherein the protecting group is Boc.

27 (New). The amino acid composition of claim 1, wherein the buckyketone comprises the following compound:



28 (New). The synthetic polymer of claim 10, wherein the buckyketone comprises the following compound:

